NASA
Beginning Engineering, Science and Technology
(B.E.S.T.) K- 8 Educator Workshop

You're Invited

August 19th – with 30 min pre and post conference

One Example of an Activity

OBJECTIVE

To demonstrate an understanding of the Engineering Design Process while utilizing each stage to successfully complete a team challenge.

CHALLENGE

The team challenge is to design and build a satellite that falls within certain size and weight constraints. This satellite will be designed to orbit the Moon. It will have to carry come combination of cameras, gravity probes, and heat sensors to look at or probe the Moon's surface. The satellite should withstand a 1-meter Drop Test without any parts falling off of it.

PROCESS SKILLS

Measuring, calculating, designing, evaluating

MATERIALS

General building supplies
Bag of buttons of a variety of sizes

WORKSHEETS

Imagine and Plan (2 pages)

BEST
BEGINNING ENGINEERING, SCIENCE, AND TECHNOLOGY

About the Conference

This NASA BEST program was developed by at team from the NASA Space Flight Center's Office of Education in support of NASA's Exploration Systems Mission Directorate (ESMD). It is designed to teach students the Engineering Design Process. The Engineering Design Process is a series of steps that engineers use to guide them as they solve problems. The emphasis is for students to understand that engineers must "imagine and plan" before they begin to build and experiment. ESMD serves as a stepping stone for future exploration of Mars and other destinations

All activities are intended for students to work in teams. It is recommended that each team consist of 3 or 4 students. The activities can be used as in-school curriculum or after-school clubs; as a set or individually. This guide of activities is also designed to keep material costs to a reasonable limit, using materials often already found in the classroom or from home. Furthermore, all activities correlate to national science, mathematics, technology, and engineering standard(s).

Dates for Conference: August 19th (8 hour session) in Great Falls or via video to all schools plus two online Elluminate sessions - 30 minutes each: one Aug 16th at 7:00 pm and the follow-up on Aug 23rd at 7:00 pm.

Attendee Profile

This project created three guides to accommodate three grade groups: K-2, 3-5 and 6-8. All follow the same set of activities that teach students about NASA's efforts to return to the Moon: investigating the Moon remotely (Part 1), modes of transportation to and on the Moon (Part 2), and humans living and working on the Moon (Part 3)

Vision Net Sponsor - NASA Goddard Space Flight Center's Office of Education

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